

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

TUE 10 OCT 1922

Received at London Office

Date of writing Report

2/10/1922 When handed in at Local Office

7/10/1922

Port of NEWCASTLE-ON-TYNE

No. in Survey held at

Newcastle.

Date, First Survey

23 Aug.

Last Survey

8 Sept

1922

Reg. Book.

Y2348

on the

S. S. San Roberto

(Number of Visits.....)

Tons

Gross 5650

Net

Built at

Newcastle

By whom built

S. W. G. A. Whitworth & Co

Yard No.

987

When built 1922

Owners

Eagle Oil Company

Port belonging to

London

Electric Light Installation fitted by

S. W. G. A. Whitworth & Co Ltd

Contract No.

987

When fitted 1922

System of Distribution

Double wire

Pressure of supply for Lighting

100

volts, Heating

—

volts, Power

100

volts.

Direct or Alternating Current, Lighting

Direct

Power

Direct

If alternating current system, state frequency of periods per second

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off

yes ✓

Generators, do they comply with the requirements regarding overload

yes ✓

, are they compound wound

yes ✓

are they over compounded 5 per cent.

yes ✓

, if not compound wound state distance between each generator

Where more than one generator is fitted are they arranged to run in parallel

no

, is an adjustable regulating resistance fitted in

series with each shunt field

yes ✓

Are all terminals accessible and clearly marked

yes ✓

, are they so spaced or shielded that they cannot be accidentally earthed,

or short circuited

yes ✓

Are the lubricating arrangements of the generators as per Rule

yes ✓

Position of Generators

On platform at after end of engine room

is the ventilation in way of the generators satisfactory

yes ✓

, are they clear of all inflammable material

yes ✓

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators

— and —, are the generators protected from mechanical injury and damage from water, steam or oil

yes ✓

are their axis of rotation fore and aft

yes ✓

Earthing, are the bedplates and frames of the generating plant efficiently earthed

yes ✓

are the prime movers and

their respective generators in metallic contact

yes ✓

Main Switch Boards, where placed

On platform at after end of engine room, sub-switchboard

amidships on bridge deck

If the generators and main switchboard are not placed in the same compartment, is each generator provided with

a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes

yes ✓

are they protected from mechanical injury and damage from water, steam or oil

yes ✓

, if situated near unprotected

woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards

—

and —

are they constructed wholly of durable, incombustible non-absorbent materials

yes ✓

, is all insulation of high dielectric strength and of

permanently high insulation resistance

yes ✓

, if semi-insulating material is used, are all conducting parts connected to one pole

insulated from the slab with mica or micanite and the slab similarly insulated from its framework

—

, and is the

frame effectively earthed

yes ✓

Are the following fittings as per Rule, viz.:— spacing or shielding of live parts

yes ✓

, accessibility of all parts

yes ✓

, absence of fuses on back of board

yes ✓

, proportion of omnibus

bars

yes ✓

, individual fuses to voltmeter, pilot or earth lamp

yes ✓

, connections of switches

yes ✓

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

Double pole ✓

switches & fuses on dynamo mains & on each outgoing pair of mains

Instruments on main switchboard

2

ammeters

2

voltmeters

—

synchronising device for paralleling purposes

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

earth lamps with

switches

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules

yes ✓

Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule

yes ✓



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Special terminal gangways

Insulation of Cables, state type of cables, single or twin *others single* are the cables insulated and protected as per Tables III or *IV* of the Rules *yes*

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *3 volts*

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.007 square inch and above provided with soldering sockets *yes*

Paper Insulated Cables. If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound *yes*

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage *yes*

Support and Protection of Cables, state how the cables are supported and protected *head covered + armoured cables clipped to beams etc with galvanised iron clips. head covered cables clipped up with brass clips. Special turns clipped to underside of gangways*

If cables are run in wood casings, are the casings and caps secured by screws *yes*, are the cap screws of brass *yes*, are the cables run in separate grooves *yes*. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VI *yes*

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements *none made*

Joints in Cables, state if any, and how made, insulated, and protected *none made*

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands *yes*

Bushes in Beams and Non-watertight Positions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed *yes* state the material of which the bushes are made *lead*

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *yes*

are their connections made as per Rule *yes*

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule *yes*

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven *yes*

Navigation Lamps, are these separately wired *yes*, controlled by separate switch and separate fuses *yes*

are the fuses double pole *yes*, are the switches and fuses grouped in a position accessible only to the officers on watch *yes*

has each navigation lamp an automatic indicator as per Rule *yes*, are separate screens provided for the use of oil and electric side lights *yes*

are separate oil lanterns provided for the mast head lights and side lights *yes*

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, water tight *yes*

are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected *none*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *special gaslight*

"Tough" fittings in gaslight piping, how are the cables led *at the distribution box in Bridge space port.*

where are the controlling switches situated *at the distribution box in Bridge space port.*

Searchlight Lamps, No. of *1*, whether fixed or portable *fixed*, are their fittings as per Rule *yes*

Arc Lamps, other than searchlight lamps, No. of *1*, are their live parts insulated from the frame or case *yes*, are their fittings as per Rule *yes*

Motors, are their working parts readily accessible *yes*, are the coils self-contained and readily removable for replacement *yes*

are the brushes, brush holders, terminals and lubricating arrangements as per Rule *yes*, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material *yes*

are they protected from mechanical injury and damage from water, steam or oil *yes*, are their axis of rotation fore and aft *yes*

if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type *yes*, if not of this type, state distance of the combustible material horizontally or vertically above the motors *yes* and *yes*

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed as per Rule *yes*

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule *yes*

Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings *yes*

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office *yes*

PARTICULARS OF GENERATING PLANT.									
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.		
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN	2	12	100	120	320	Two double acting open type single cylinder steam engines.			
AUXILIARY									
EMERGENCY									
ROTARY TRANSFORMER									

LIGHTING AND HEATING CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	2	1168	37	0.064	120	40 x 60	V.I.R.	Lead covered + arm.
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS	3	3024	37	0.08	98.0	30 x 30	V.I.R.	Lead covered + armoured taped, arm. braided (Special turn)
	ENGINE ROOM	2	01462	7	0.052	8.6	20	"	Lead covered + armoured
	BOILER ROOM	2	00465	7	0.029	3.4	180	"	"
	Section box for above	2	01462	7	0.052	12.0	20	"	"
	Section box engine room gto	2	0396	19	0.052	30.6	130	"	"
	Box " " port	2	02214	7	0.064	16.0	110	"	Lead covered
	" " " " " " " "	2	01462	7	0.052	14.6	20	"	"
	Box Box (Navigation)	2	02214	7	0.064	11.6	60	"	"
	Box Box office gto	2	01592	19	0.072	60.2	30	"	"
	Box Box office gto aft	2	01462	7	0.052	14.8	20	"	"
	" " " " " " " "	2	01462	7	0.052	15.4	55	"	"
	" " " " " " " "	2	01462	7	0.052	12.6	60	"	"
	2 Box Box crew gto	2	01592	19	0.072	17.4	360	"	LCYA (Special turn)
	WIRELESS	2	02214	7	0.064	28	110	V.I.R.	L.C. + A.
	SEARCHLIGHT	2	00399	3	0.036	1.2	300	"	Lead covered + braided
	MASTHEAD LIGHT	2	00399	3	0.036	1.2	280	"	"
	SIDE LIGHTS	2	00194	3	0.029	1.2	100	"	LCYA
	COMPASS LIGHTS	2	00194	3	0.029	1.2	100	"	LCYA
	STERN LIGHTS	2	00194	3	0.029	1.2	185	"	LCYA
	CARGO LIGHTS	2	00455	7	0.029	3.6	130	"	LCYA
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP								
	MAIN BILGE LINE PUMPS								
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP								
	SANITARY PUMP								
	CIRC. SEA WATER PUMPS								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP								
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR								
	WORKSHOP MOTOR	1	00701	7	0.036	10	150	V.I.R.	L.C. + A.
	VENTILATING FANS								

All Conductors are of annealed copper conforming to British Standard Specification No. 7.

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

S. W. G. Armstrong Whitworth & Co. Electrical Engineers.

Date 6/10/22.

COMPASSES.

Distance between electric generators or motors and standard compass 21 1/2 feet nearest motor 25 feet. Aft compass 15 feet nearest motor 45 feet
Distance between electric generators or motors and steering compass 21 1/2 " " " 20 feet

The nearest cables to the compasses are as follows:—

A cable carrying	.6	Ampères	1	feet from standard compass	4	feet from steering compass.
A cable carrying	.6	Ampères	4	feet from standard compass	1	feet from steering compass.
A cable carrying	.8	Ampères	4	feet from standard compass	4	feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted

The maximum deviation due to electric currents was found to be _____ degrees on _____ course in the case of the standard compass, and _____ degrees on _____ course in the case of the steering compass.

For SIR W. G. ARMSTRONG, WHITWORTH & CO. L^{td}

H. G. Williams

Builder's Signature.

Date 6. 10. 22.

Is this installation a duplicate of a previous case No If so, state name of vessel _____

General Remarks (State quality of workmanship, opinions as to class, &c. The above installation is in accordance with the Society's Rules. This vessel is eligible in my opinion for notation Elec Light, wireless.

THE RECORD

Elec Light.

C. H. B.

2/11/22

Total Capacity of Generators 24 Kilowatts

The amount of Fee ... £ 19 : 10 : 20/9/22

Travelling Expenses (if any) £ :

When received

See debit book.

W. T. Badger

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Im. 3.22.—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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